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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,321	06/28/2005	Yoshimaro Fujii	046124-5317	2802

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DRINKER BIDDLE & REATH (DC)
1500 K STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005-1209

EXAMINER

ULLAH, ELIAS

ART UNIT	PAPER NUMBER
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2812

MAIL DATE	DELIVERY MODE
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06/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,321	Applicant(s) FUJII ET AL.	
	Examiner Elias Ullah	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-23, 29-33 and 39-43 is/are allowed.
- 6) ☒ Claim(s) 13-18, 24-28, 34-38, 44-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11/09/2006, 6/20/06/4/20/06, 4/4/06, 2/22/06, 8/30/05, 5/4/2005.

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DETAILED ACTION

This office action is in response to an application filed on 6/28/2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 17-18, 24-28, 34-38, 44-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Srinivasan (US 5,211,805).

With respect to claims 13, 24-28, 34-38, 44-47 Srinivasan shows a laser processing method comprising the step of irradiating an object to be processed comprising a substrate and a laminate part disposed on a front face of the substrate with laser light while positioning a light-converging point at least within the substrate (col. 6, lines 1 –51), so as to form a modified region due to multiphoton absorption at least within the substrate, and causing the modified region to form a starting point region for cutting along a line along which the object should be cut in the object inside by a predetermined distance from a laser light incident face of the object.

With respect to claims 17-18, and 48-51 Srinivasan shows a substrate dividing method wherein a front face of the substrate is formed with a functional device; and wherein a rear face of the substrate is ground in the step of grinding the substrate; wherein the step of grinding the substrate includes a step of subjecting the rear face of the substrate to chemical etching (col. 4, lines 38-50).

With respect to claims 52-55 Srinivasan shows a substrate dividing method wherein the substrate is ground such that at least a part of a fracture generated from the starting point region for cutting acting as a start point in the thickness direction of the substrate remains in the substrate and modified region does not remain in the substrate in the step of grinding the substrate (col. 6, lines 9-25).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan as applied to claim 13 above, and further view of Yamazaki et al. (Pub. No.: US 2002/0158288).

With regard to claims 14-16 Srinivasan fails to show the substrate is a semiconductor substrate and the substrate is an insulating substrate, but Yamazaki et al. semiconductor substrate and the substrate is an insulating substrate [0168]. In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a substrate with semiconductor substrate of Srinivasan because semiconductor substrate is used to form IC circuits.

Allowable Subject Matter

Claims 19-23, 29-33 and 39-43 allowed.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: with respect to claims 19-23, 29-33 and 39-43, there is no prior art available or obvious motivation to combine elements of prior art which teach the step of irradiating an object to be processed comprising a substrate and a laminate part disposed on a front face of the substrate with laser light while positioning a light converging point at least within the substrate under a condition with a peak power density of at least 1×10^8 (W/cm²) at the light converging point and a pulse width of 1 micro second or less. The closest art (US 5,211,805) of the record teaches peak power density 1×10^6 (W/cm²).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Ullah whose telephone number is (571) 272-1415. The examiner can normally be reached on weekdays, between 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL LEBENTRITT can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2812

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E. Ullah,
June 19, 2007.

SCOTT B. GEYER
PRIMARY EXAMINER

Scott B. Geyer 6/19/07